JVC

SERVICE MANUAL

MODEL JA-S55

STEREO INTEGRATED AMPLIFIER

No.2447
FEB.1978

Contents

Page

1. Specifications 2
2. Block Diagram 2
3. Removal of Top Cover and Bottom Plates 3
4. Main Parts Location and Part Numbers 4
5. Exploded Views and Part Numbers
   - 5-(1) Front Panel 5
   - 5-(2) Heat Sink and Power IC's 6
   - 5-(3) Rear Panel 6
6. Adjustment Procedures
   - 6-(1) Main Amp. Center Voltage 7
   - 6-(2) Power Meter 8
   - 6-(3) Equalizer Amp. Center Voltage 8
7. Printed Circuit Board Ass'y and Parts List
   - 7-(1) TXX-132B, C, D or E Driver & Equalizer Amp. P.C. Board Ass'y 9
   - 7-(2) TXX-133B, C, D or E Power Amp. & Protector P.C. Board Ass'y 16
   - 7-(3) TPS-194A AC Outlet & Voltage Selector P.C. Board Ass'y 20
   - 7-(4) TPS-197A Line Voltage Selector P.C. Board Ass'y 20
8. Packing Materials and Part Numbers 21
9. Accessories List 21
10. JA-S55 Schematic Diagram 22
11. Parts List with Specified Numbers for Designated Areas 24

Warning:
When replacing the parts maked with ⚠ , be sure to use the designated parts to ensure safety.

Power Specifications

Areas	Line Voltage & Frequency	Power Consumption
U.S.A.	AC 120 V, 60 Hz	255 W
CANADA	AC 120 V, 60 Hz	320 VA
EUROPE	AC 220 V ∿. 50 Hz	478 W
U.K. & AUSTRALIA	AC 240 V∿, 50 Hz	478 W
OTHER AREAS	AC 100/120/220/240 V∿ Selectable, 50/60 Hz	478 W

3. Removal of Top Cover and Bottom Plates

Procedure (Top Cover)

1. Remove 6 screws (Item No. 1) from the top cover (Item No.2).
2. Remove 2 screws (Item No. 3) from the rear panel back of top cover.

Procedure (Bottom Plate)

1. Remove 2 screws (Item No. 4) from the sub bottom plate (Item No. 5).
2. Remove 7 screws (Item No. 6) from the buttom plate (Item No. 7).

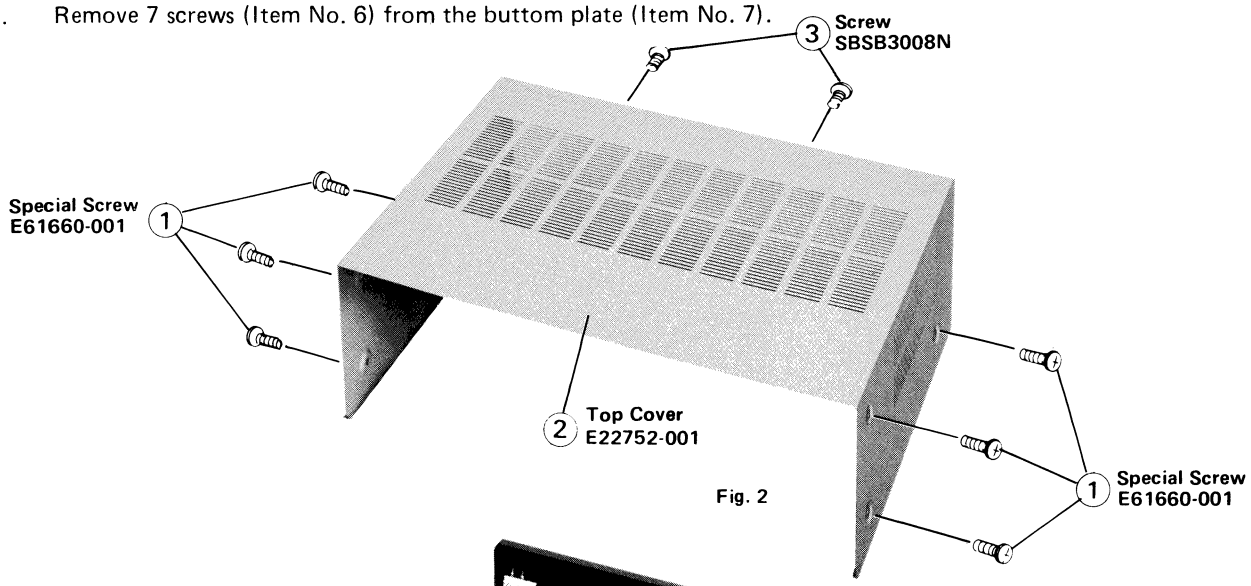


Fig. 2

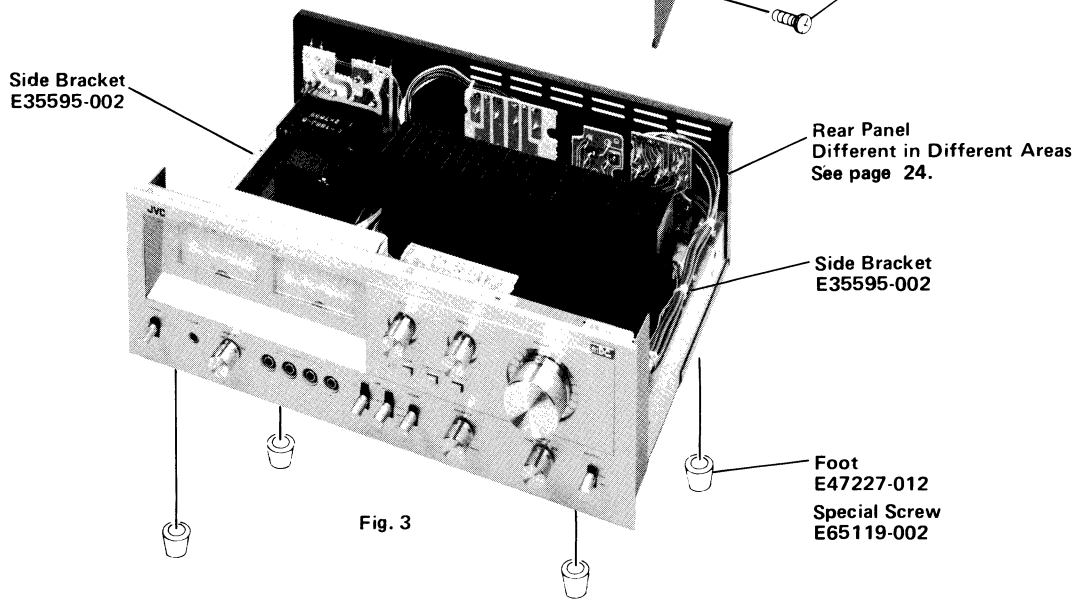

Side Bracket E35595-002
Rear Panel Different in Different Areas See page 24.
Side Bracket E35595-002
Foot E47227-012
Special Screw E65119-002

Fig. 3

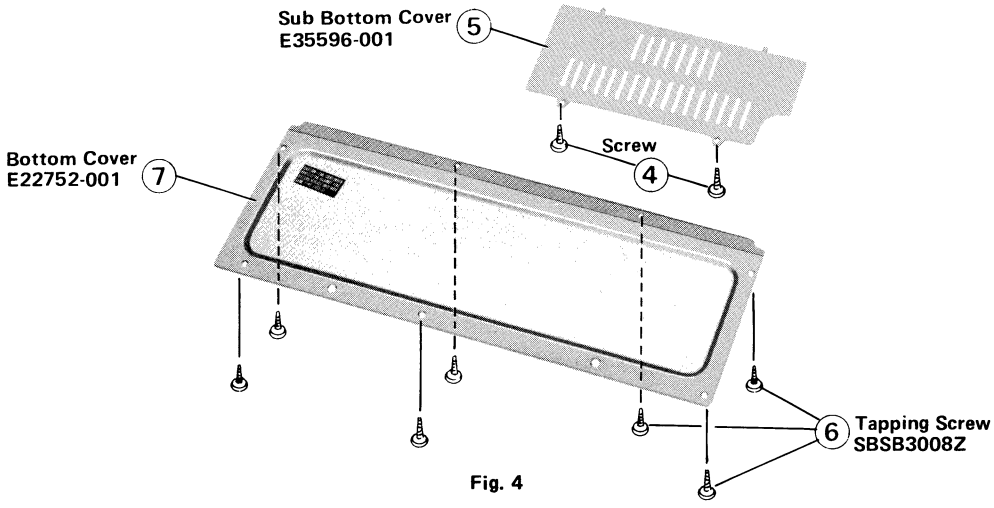


Fig. 4

1. Specifications

CIRCUITRY : All-Stage
ICL
Tri-DC Amplifier

POWER AMPLIFIER SECTION
(measured from AUX INPUT to SPEAKER OUTPUT at Volume maximum.)

Output Power	**: 60 watts per channel, min. RMS, both channels driven, into 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.02 % total harmonic distortion**
	65 watts RMS per channel into 8 ohms (1 kHz, 0.02 % THD)
	70 watts RMS per channel into 4 ohms (1 kHz, 0.05 % THD)
Total Harmonic Distortion (1 kHz)	: 0.005 % at Rated Output 0.02 % at 1 watt Output
Intermodulation Distortion	: 0.01 % at Rated Output 0.01 % at 1 watt Output
Damping Factor	: 50 (20 – 20 kHz, 8 ohms)
Load Impedance	: 4 – 16 ohms (SYSTEM 1 or 2) 8 – 16 ohms (SYSTEM 1 + 2)

PREAMPLIFIER SECTION

Input Sensitivity (Impedance)	
PHONO	: 2.5 mV (47k ohms)
TUNER	: 200 mV (50k ohms)
AUX	: 200 mV (50k ohms)
TAPE PLAY	: 200 mV (50k ohms) (Tape-1, 2)
Phono Overload Capacity	: 230 mV (RMS)
RIAA Phono Equalization	: ± 0.3 dB (20 – 20 kHz)
Output Level TAPE REC	: 200 mV
Signal-to-Noise Ratio (RMS)	
PHONO (IHF A Network)	: 81 dB
TUNER, AUX, TAPE PLAY (IHF A Network)	: 105 dB
Frequency Response	: 5 Hz – 100 kHz (+0, -1 dB)
Tone Controls	: Bass 100 Hz ± 8 dB Treble 10 kHz ± 8 dB
Subsonic Filter	: 6 dB/oct. at 18 Hz
Muting Level	: -20 dB
Loudness Control (-30 dB Volume Control)	: +6 dB at 100 Hz, +4 dB at 10 kHz

GENERAL

Power Source	: See page 1.
Dimensions (H x W x D)	: 149 x 420 x 334 (mm) 6 x 16-3/4 x 13-3/8 (inches)
Weight (Net)	: 10 kg (22 lbs.)

Design and specifications subject to change without notice.

2. Block Diagram

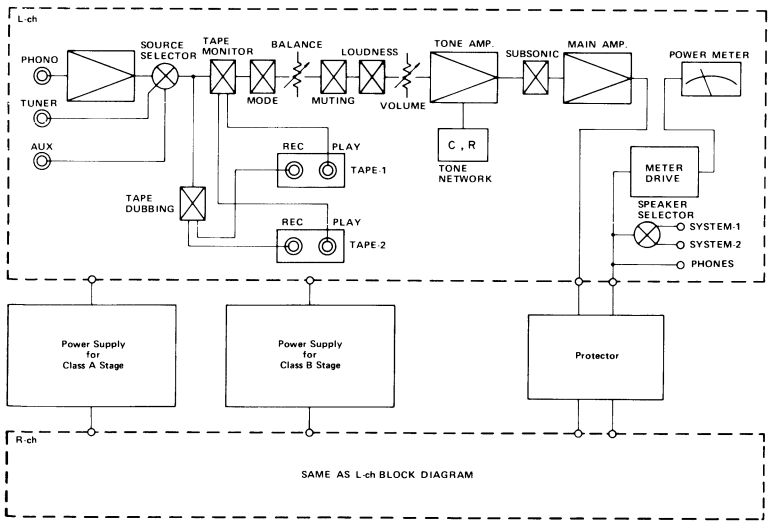
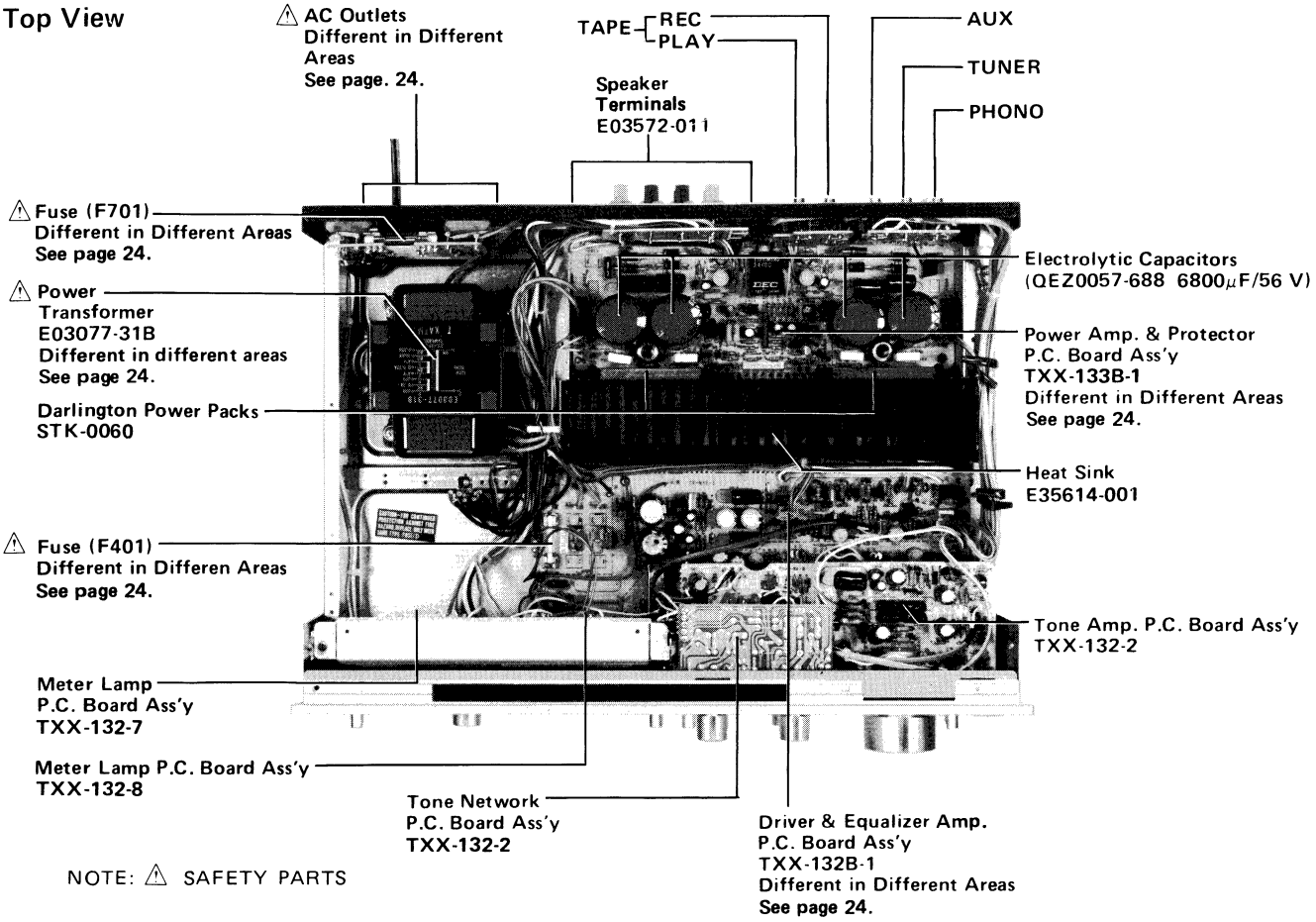


Fig. 1

4. Main Parts Location and Part Numbers

Top View



NOTE: ⚠ SAFETY PARTS

Fig. 5

Bottom View

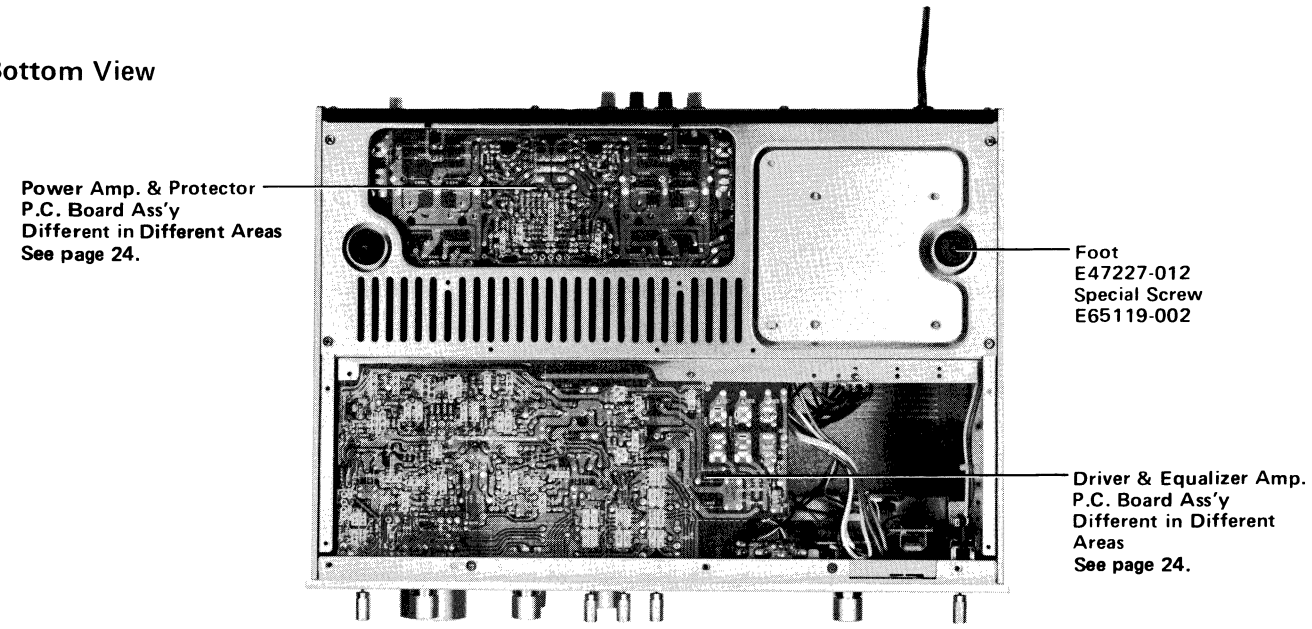


Fig. 6

5. Exploded Views and Part Numbers

5-(1) Front Panel

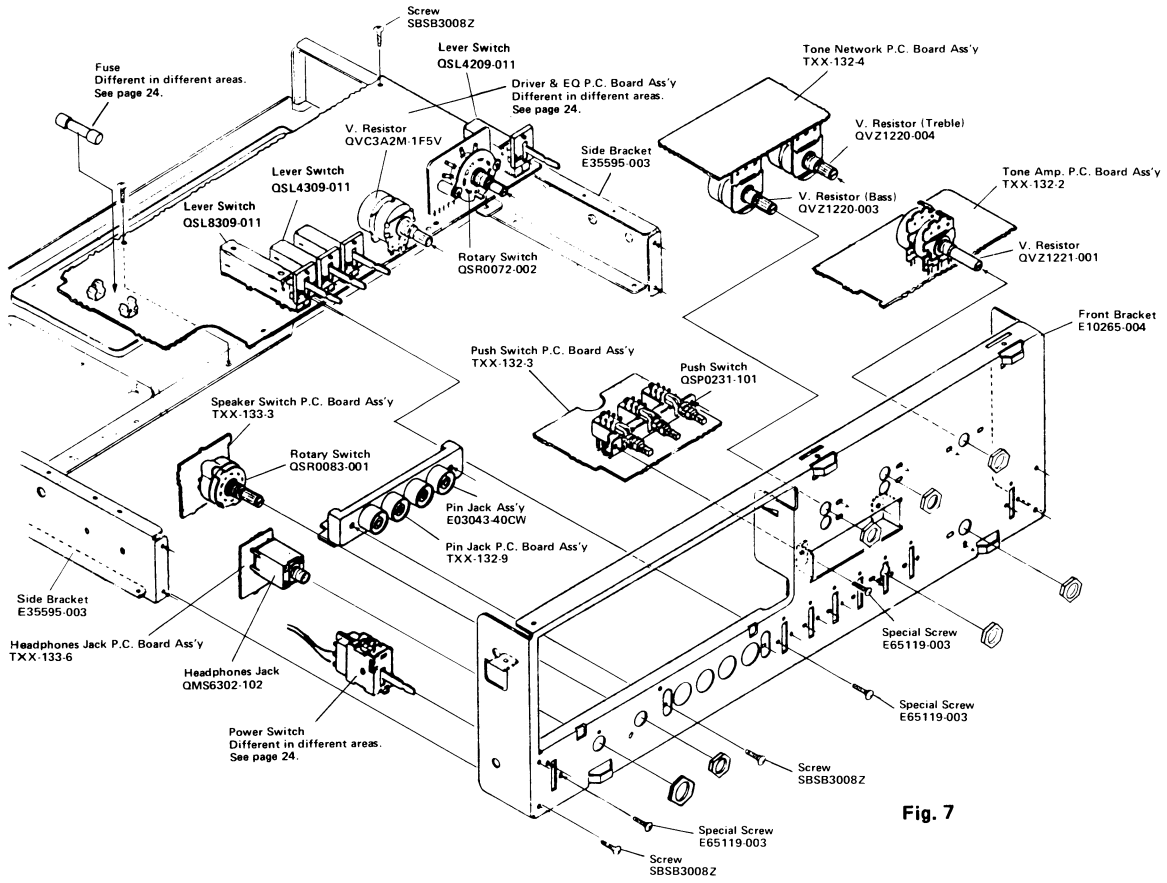


Fig. 7

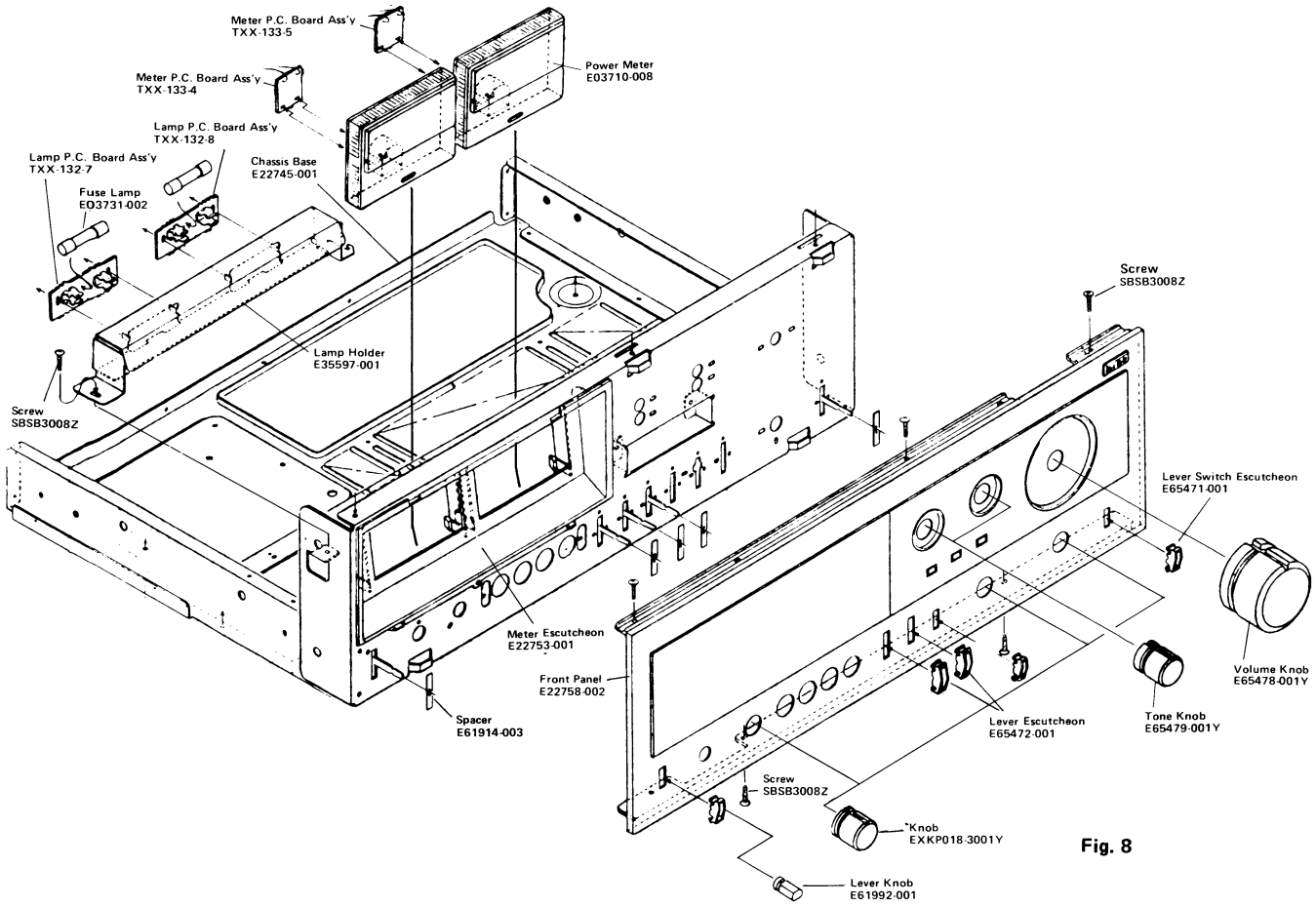


Fig. 8

5-(2) Heat Sink and Power IC's

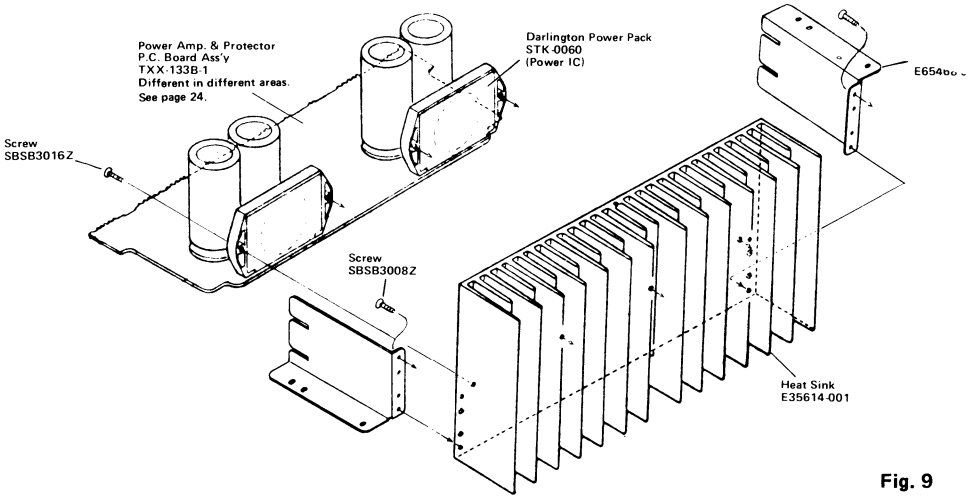


Fig. 9

5-(3) Rear Panel

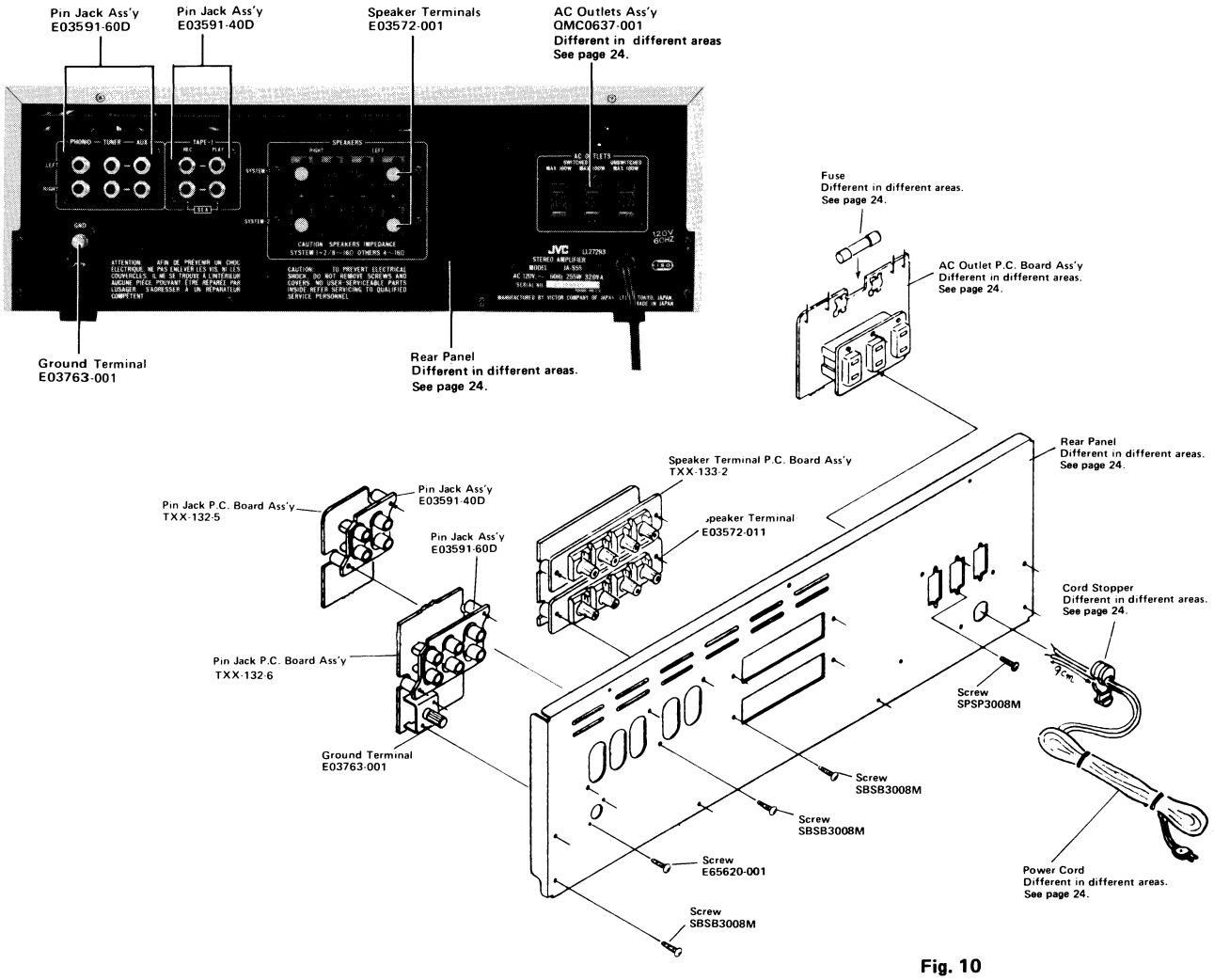
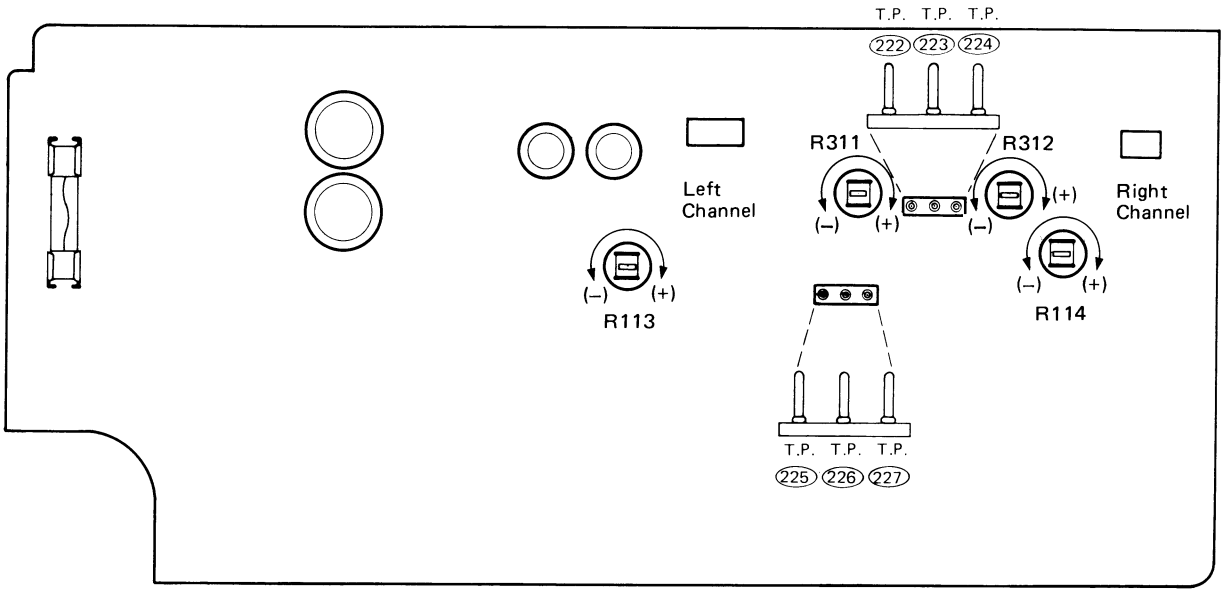


Fig. 10

6. Adjustment Procedures

6-(1) Main Amp. Center Voltage

1. Set the semi-fixed resistors R311 (L channel) and R312 (R channel) located on the Driver & Equalizer Amp. P.C. Board (TXX-132-1) to center position before flipping up the power switch to ON.
2. The measurement points for center voltage exist at test points (T.P.) 112 and 114 on the left channel and at 114 and 116 on the right channel. However in the event that relay is normally set to ON, it is possible to measure the center voltage at the speaker terminals.
3. Adjust R311 and R312 so that the voltage reading at the measurement points of the above-mentioned is within ± 10 mV. (In the event of the employment of a tester with which it is difficult to read values under 10 mV, adjust them to about 0 V.)



Driver & Equalizer Amp. P.C. Board (TXX-132-1) Fig. 11

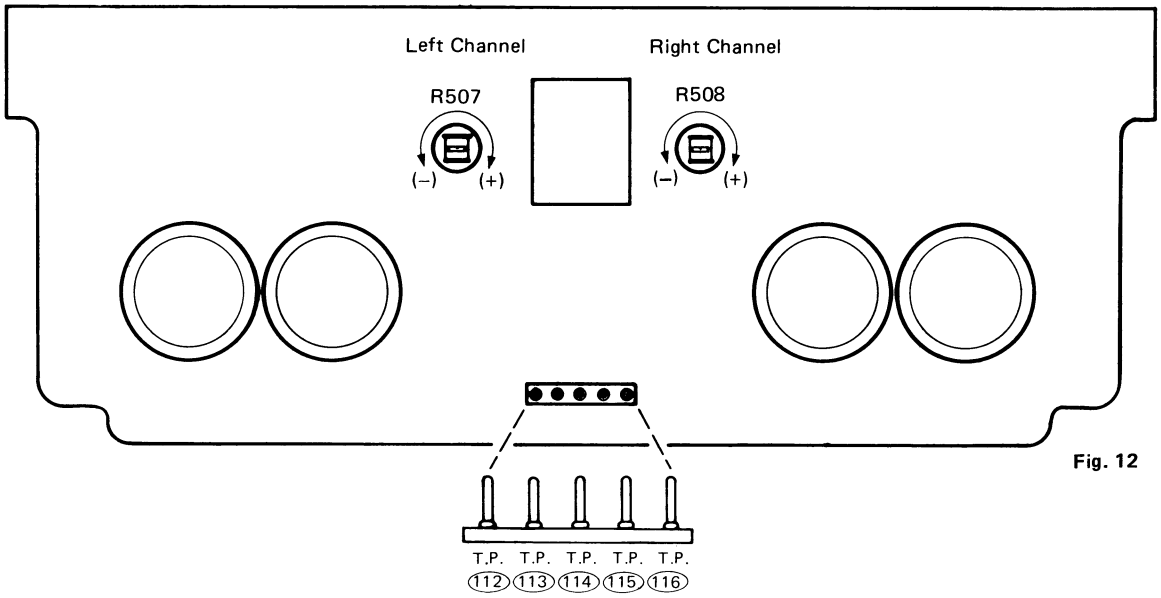


Fig. 12

Power Amp. & Protector P.C. Board (TXX-133-1)

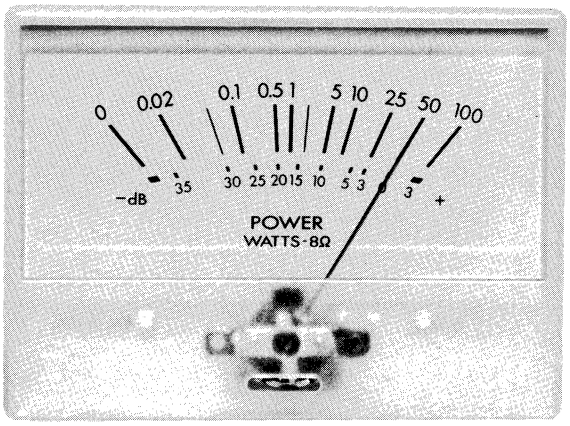
Adjustment Item	Measurement Points (TXX-133-1)	Adjustment Point (TXX-132-1)	Adjustment Voltage
Power Amplifier Center Voltage Adjustment	L-Channel T.P. 112 – 114 R-Channel T.P. 114 – 116	R311 R312	0 mV (within ± 10 mV)

6-(2) Power Meter

Power Meter Sensitivity Adjustment

For shipment from the factory, sensitivity is adjusted to the most suitable condition. However in the event of a meter replacement or of a severely drifted meter indication, readjust it by the following means:

1. Adjust the output voltage on 8 Ω dummy load so that the reading is 20.0 V (50 W/8 Ω) when injecting a sine wave input of 1 kHz from the terminals AUX.
2. Align the power meter indicator on a value of 50 W (0 dB) by adjusting the semi-fixed resistors R507 (L channel) and R508 (R channel) located on the Power Amp. & Protector P.C. Board (TXX-133-1).



Power Meter (E03710-008)

Fig. 13

6-(3) Equalizer Amp. Center Voltage

Equalizer Amplifier Center Voltage Adjustment

This equalizer amplifier consists of a DC amplifier. Severe deviation from the center voltage will result in a deteriorated tone quality such as a drop in dynamic range, increased distortion etc. Every time a change in the pair of F.E.T. 2SK106W(C) in the first stage is made, adjust this center voltage. (In the event of changing a pair of F.E.T., in order not to wind directly the F.E.T. leads install a pair of F.E.T. so that the F.E.T.'s surface is positioned low and the silicon tube is flush with the P.C. Board.)

1. Set the semi-fixed resistors R113 (L channel) and R114 (R channel) located on the Driver & Equalizer Amp. P.C. Board Txx-132-1) to center position before pressing the power switch ON.
2. The measurement points of center voltage exist at the test points (T.P.) 225 and 226 on the left channel and at 226 and 227 on the right channel.
3. Pay attention to the fact that this adjustment is more or less critical but not unusual because of the high DC gains and of the clear appearance of the variance between the two F.E.T's caused by this adjustment.
4. Adjust R113 and R114 so that the voltage reading at the measurement points of the above-mentioned is within ± 1 V.

Adjustment Item	Measurement Point and Adjustment Point (TXX-132-1)	Adjustment Voltage
Equalizer Amplifier Center Voltage Adjustment	L Channel T.P. 225 – 226 R113 R Channel T.P. 226 – 227 R114	0 V (within ± 1 V)

7. Printed Circuit Board Ass'y and Parts List

7-(1) TXX-132 B,C,D or E Driver & Equalizer Amp. P.C. Board Ass'y

Note: The number of TXX-132 varies according to the areas employed. See page 24.

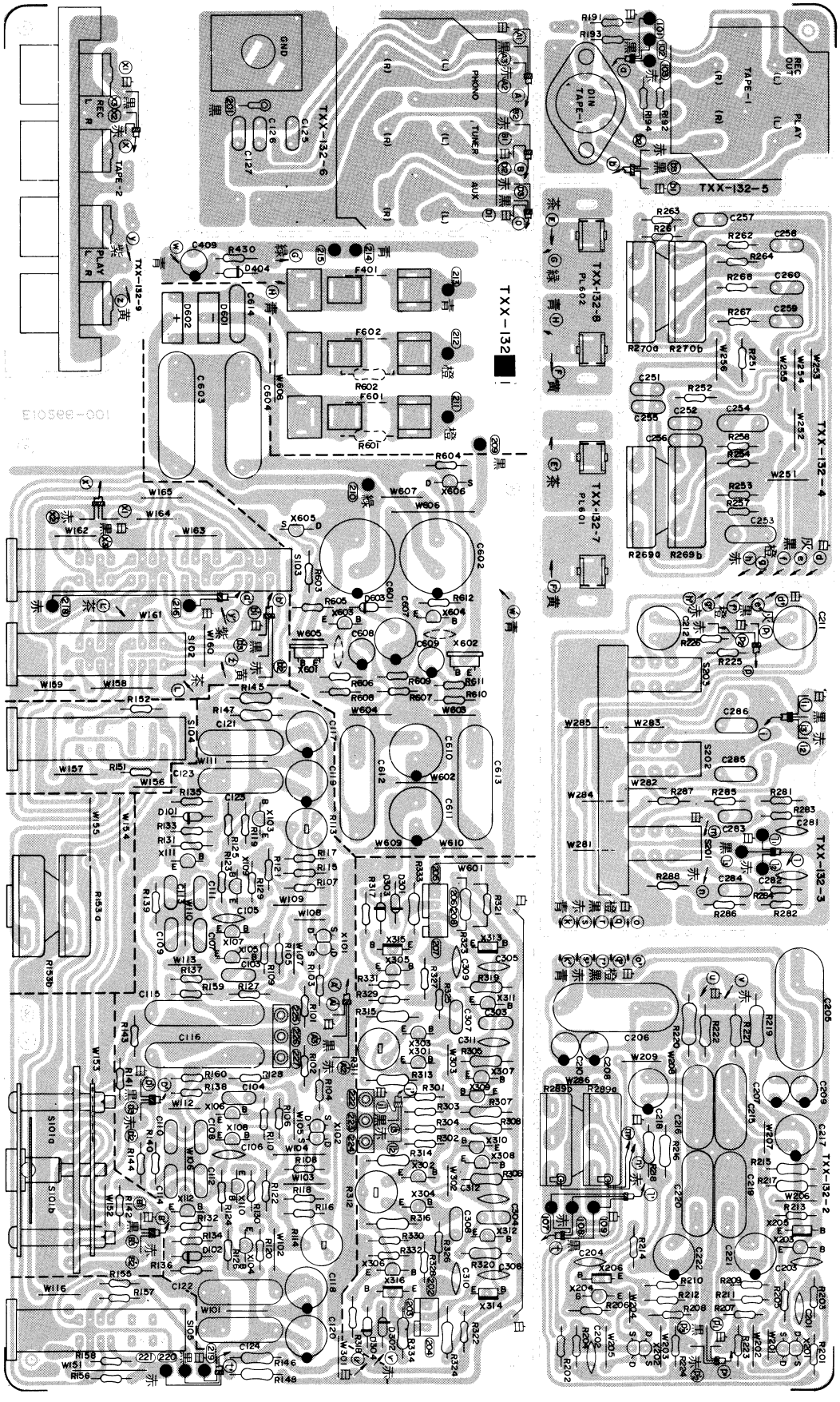
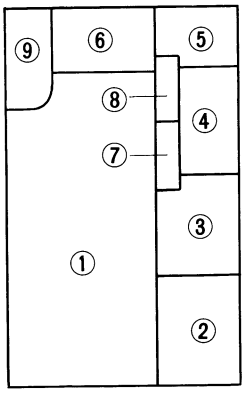


Fig. 14

Locations

① TXX-132-1 Driver & Equalizer Amp. P.C. Board Ass'y
② TXX-132-2 Tone Amp. P.C. Board Ass'y
③ TXX-132-3 Push Switch P.C. Board Ass'y
④ TXX-132-4 Tone Network P.C. Board Ass'y
⑤ TXX-132-5 TAPE-1 Pin Jack P.C. Board Ass'y
⑥ TXX-132-6 Pin Jack P.C. Board Ass'y
⑦ TXX-132-7 Meter Lamp P.C. Board Ass'y
⑧ TXX-132-8 Meter Lamp P.C. Board Ass' y
⑨ TXX-132-9 TAPE-2 Pin Jack P.C. Board Ass'y



Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X101	2SK106W (C)	0.3 W		F.E.T.	Hitachi
X102	2SK106W (C)	"		"	"
X103	2SC1775AV (E, F)	"	200 MHz	Silicon	"
X104	2SC1775AV (E, F)	"	"	"	"
X105	2SC1775AV (E, F)	"	"	"	"
X106	2SC1775AV (E, F)	"	"	"	"
X107	2SC1775AV (E, F)	"	"	"	"
X108	2SC1775AV (E, F)	"	"	"	"
X109	2SB560 (E)	0.75 W	100 MHz	"	Sanyo
X110	2SB560 (E)	"	"	"	"
X111	2SD438 (D, E)	"	"	"	"
X112	2SD438 (D, E)	"	"	"	"
X201	2SK106W (C)	0.3 W		F.E.T.	Hitachi
X202	2SK106W (C)	"		"	"
X203	2SA872AV (D, E)	"	120 MHz	Silicon	"
X204	2SA872AV (D, E)	"	"	"	"
X205	2SC1904 (B, V)	1 W	130 MHz	"	Fujitsu
X206	2SC1904 (B, V)	"	"	"	"
X301	2SC1775AV (F1)	0.3 W	200 MHz	"	Hitachi
X302	2SC1775AV (F1)	"	"	"	"
X303	2SC1775AV (F1)	"	"	"	"
X304	2SC1775AV (F1)	"	"	"	"
X305	2SC1775AV (E, F)	"	"	"	"
X306	2SC1775AV (E, F)	"	"	"	"
X307	2SA872AV (D, E)	"	120 MHz	"	"
X308	2SA872AV (D, E)	"	"	"	"
X309	2SA872AV (D, E)	"	"	"	"
X310	2SA872AV (D, E)	"	"	"	"
X311	2SA872AV (D, E)	"	"	"	"
X312	2SA872AV (D, E)	"	"	"	"
X313	2SC1904 (B, V)	1 W	130 MHz	"	Fujitsu
X314	2SC1904 (B, V)	"	"	"	"
X315	2SC1904 (B, V)	"	"	"	"
X316	2SC1904 (B, V)	"	"	"	"
X601	2SD313V (E)	30 W	8 MHz	"	Sanyo
X602	2SB507V (E)	"	"	"	"
X603	2SC1775AV (E, F)	0.3 W	200 MHz	"	Hitachi
X604	2SA872AV (D, E)	0.3 W	120 MHz	"	"
X605	2SK68A (M)	0.25 W		F.E.T.	NEC
X606	2SK68A (M)	"		"	"

Diodes

Item No.	Part Number	Rating	Description	Maker
D101	1S2473		Silicon	Toyo Dengu
D102	1S2473		〃	〃
D301	1S2473		〃	〃
D302	1S2473		〃	〃
D303	1S2473		〃	〃
D304	1S2473		〃	〃
D404	1S2473		〃	〃
D601	S2VC20R		〃	Shindengen
D602	S2VC20		〃	〃
D603	XZ-132		〃	JRC

Capacitors

Item No.	Part Number	Rating		Description
C103	QFP32AJ-471	470 pF	100 V	Polypropylene
C104	QFP32AJ-471	〃	〃	〃
C105	QCS31HJ-470	47 pF	50 V	Ceramic
C106	QCS31HJ-470	〃	〃	〃
C107	QFP32AJ-432	4 300 pF	100 V	Polypropylene
C108	QFP32AJ-432	〃	〃	〃
C109	QFP32AJ-622	6 200 pF	〃	〃
C110	QFP32AJ-622	〃	〃	〃
C111	QFP32AJ-271	270 pF	〃	〃
C112	QFP32AJ-271	〃	〃	〃
C113	QFP32AJ-272	2 700 pF	〃	〃
C114	QFP32AJ-272	〃	〃	〃
C115	QFH42AK-225	2.2 μF	〃	Metallized Film
C116	QFH42AK-225	〃	〃	〃
C117	QEW51VA-107	100 μF	35 V	Electrolytic
C118	QEW51VA-107	〃	〃	〃
C119	QEW51VA-107	〃	〃	〃
C120	QEW51VA-107	〃	〃	〃
C121	QFH42AK-474	0.47 μF	100 V	Metallized Film
C122	QFH42AK-474	〃	〃	〃
C123	QFH42AK-474	〃	〃	〃
C124	QFH42AK-474	〃	〃	〃
C125	QCS31HJ-270	27 pF	50 V	Ceramic
C126	QCS31HJ-270	〃	〃	〃
C127	QFP32AJ-103	0.01 μF	100 V	Polypropylene
C201	QCS31HJ-390	39 pF	50 V	Ceramic
C202	QCS31HJ-390	〃	〃	〃
C203	QCS31HJ-390	〃	〃	〃
C204	QCS31HJ-390	〃	〃	〃
C205	QFH42AK-225	2.2 μF	100 V	Metallized Film
C206	QFH42AK-225	〃	〃	〃
C207	QEW51HA-475	4.7 μF	50 V	Electrolytic
C208	QEW51HA-475	〃	〃	〃
C209	QEW51HA-475	〃	〃	〃
C210	QEW51HA-475	〃	〃	〃
C211	QEZ0046-226	22 μF	〃	〃
C212	QEZ0046-226	〃	〃	〃
C215	QFH42AK-474	0.47 μF	100 V	Metallized Film

Capacitors

Item No.	Part Number	Rating		Description
C216	QFH42AK-474	0.47 μF	100 V	Metallized Film
C217	QEW51VA-107	100 μF	35 V	Electrolytic
C218	QEW51VA-107	"	"	"
C219	QFH42AK-474	0.47 μF	100 V	Metallized Film
C220	QFH42AK-474	"	"	"
C221	QEW51VA-107	100 μF	35 V	Electrolytic
C222	QEW51VA-107	"	"	"
C251	QFM31HJ-563	0.056 μF	50 V	Mylar
C252	QFM31HJ-563	"	"	"
C253	QFM31HJ-474	0.47 μF	"	"
C254	QFM31HJ-474	"	"	"
C255	QFM31HJ-822	8 200 pF	"	"
C256	QFM31HJ-822	"	"	"
C257	QFM31HJ-153	0.015 μF	50 V	Mylar
C258	QFM31HJ-153	"	"	"
C259	QFM31HJ-104	0.1 μF	"	"
C260	QFM31HJ-104	"	"	"
C281	QCS31HJ-331	330 pF	"	Ceramic
C282	QCS31HJ-331	"	"	"
C283	QFM31HJ-273	0.027 μF	"	Mylar
C284	QFM31HJ-273	"	"	"
C285	QFM31HJ-334	0.33 μF	"	"
C286	QFM31HJ-334	"	"	"
C303	QFP32AJ-102	1 000 pF	100 V	Polypropylene
C304	QFP32AJ-102	"	"	"
C305	QFP32AJ-101	100 pF	50 V	"
C306	QFP32AJ-101	"	"	"
C307	QFZ0075-683	0.068 μF	"	Metallized Film
C308	QFZ0075-683	"	"	"
C311	QCS31HJ-470	47 pF	"	Ceramic
C312	QCS31HJ-470	"	"	"
C409	QEW51EA-475	4.7 μF	25 V	Electrolytic
C601	QEW51JA-477	470 μF	63 V	"
C602	QEW51JA-477	"	"	"
C607	QEW51CA-476	47 μF	16 V	"
C608	QEW51HA-475	4.7 μF	50 V	"
C609	QEW51HA-475	"	"	"
C610	QEW51HA-107	100 μF	"	"
C611	QEW51HA-107	"	"	"
C612	QFH42AK-225	2.2 μF	100 V	Metallized Film
C613	QFH42AK-225	"	"	"
C614	QFZ0072-223	0.022 μF	630 V	"

Resistors

Item No.	Part Number	Rating		Description
R101	QRD141J-473SL	47 kΩ	1/4 W	Carbon
R102	QRD141J-473SL	"	"	"
R103	QRD141J-5R6S	5.6 Ω	"	"
R104	QRD141J-5R6S	"	"	"
R105	QRD141J-153SL	15 kΩ	"	"
R106	QRD141J-153SL	"	"	"
R107	QRD141J-153SL	"	"	"
R108	QRD141J-153SL	"	"	"
R109	QRD141J-151S	150 Ω	"	"
R110	QRD141J-151S	"	"	"
R113	QVP4AOB-221	220 Ω	0.15 W	Variable (Carbon)
R114	QVP4AOB-221	"	"	"
R115	QRD141J-101S	100 Ω	1/4 w	Carbon
R116	QRD141J-101S	"	"	"
R117	QRD141J-101S	"	"	"
R118	QRD141J-101S	"	"	"
R119	QRD141J-822SL	8.2 kΩ	"	"
R120	QRD141J-822SL	"	"	"
R121	QRD141J-681S	680 Ω	"	"
R122	QRD141J-681S	"	"	"
R123	QRD141J-103SL	10 kΩ	"	"
R124	QRD141J-103SL	"	"	"
R125	QRD141J-103SL	"	"	"
R126	QRD141J-103SL	"	"	"
R127	QRD141J-361S	360 Ω	"	"
R128	QRD141J-361S	"	"	"
R129	QRD141J-2R2S	2.2 Ω	"	"
R130	QRD141J-2R2S	"	"	"
R131	QRD141J-101S	100 Ω	"	"
R132	QRD141J-101S	"	"	"
R133	QRD141J-681S	680 Ω	"	"
R134	QRD141J-681S	"	"	"
R135	QRD141J-183SL	18 kΩ	"	"
R136	QRD141J-183SL	"	"	"
R137	QRD141J-274SL	270 kΩ	"	"
R138	QRD141J-274SL	"	"	"
R139	QRD141J-223SL	22 kΩ	"	"
R140	QRD141J-223SL	"	"	"
R141	QRD141J-101S	100 Ω	"	"
R142	QRD141J-101S	"	"	"
R143	QRD141J-224SL	220 kΩ	"	"
R144	QRD141J-224SL	"	"	"
R145	QRD126J-821	820 Ω	1/2 W	"
R146	QRD126J-821	"	"	"
R147	QRD126J-821	"	"	"
R148	QRD126J-821	"	"	"
R151	QRD141J-562S	5.6 kΩ	1/4 W	"
R152	QRD141J-562S	"	"	"
R153	QVC3A2M-1F5V	100 kΩ	1/2 W	Variable (Balancer)
R155	QRD141J-823S	82 kΩ	1/4 W	Carbon
R156	QRD141J-823S	"	"	"
R157	QRD141J-103S	10 kΩ	"	"
R158	QRD141J-103S	"	"	"
R159	QRD141J-682	6.8 kΩ	"	"
R160	QRD141J-682	"	"	"
R191	QRD141J-334S	330 kΩ	1/4 W	"
R192	QRD141J-334S	"	"	"
R193	QRD141J-104S	100 kΩ	"	"
R194	QRD141J-104S	"	"	"
R201	QRD141J-151S	150 Ω	"	"

Resistors

Item No.	Part Number	Rating		Description
R202	QRD141J-151S	150 Ω	1/4 W	Carbon
R203	QRD141J-225S	2.2 MΩ	"	"
R204	QRD141J-225S	"	"	"
R205	QRD141J-821S	820 Ω	"	"
R206	QRD141J-821S	"	"	"
R207	QRD141J-183S	18 kΩ	"	"
R208	QRD141J-183S	"	"	"
R209	QRD141J-274S	270 kΩ	"	"
R210	QRD141J-274S	"	"	"
R211	QRD141J-183S	18 kΩ	"	"
R212	QRD141J-183S	"	"	"
R213	QRD141J-153S	15 kΩ	"	"
R214	QRD141J-153S	"	"	"
R215	QRD126J-682	6.8 kΩ	1/2 W	"
R216	QRD126J-682	"	"	"
R217	QRD126J-682	"	"	"
R218	QRD126J-682	"	"	"
R219	QRG017J-222S	2.2 kΩ	1 W	Oxide Metal Film
R220	QRG017J-222S	"	"	"
R221	QRD126J-821	820 Ω	1/2 W	Carbon
R222	QRD126J-821	"	"	"
R223	QRD141J-272S	2.7 kΩ	1/4 W	"
R224	QRD141J-272S	"	"	"
R225	QRD141J-333S	33 kΩ	"	"
R226	QRD141J-333S	"	"	"
R251	QRD141J-562S	5.6 kΩ	"	"
R252	QRD141J-562S	"	"	"
R253	QRD141J-821S	820 Ω	"	"
R254	QRD141J-821S	"	"	"
R257	QRD141J-823S	82 kΩ	"	"
R258	QRD141J-823S	"	"	"
R261	QRD141J-152S	1.5 kΩ	"	"
R262	QRD141J-152S	"	"	"
R263	QRD141J-224S	220 kΩ	"	"
R264	QRD141J-224S	"	"	"
R267	QRD141J-271S	270 Ω	"	"
R268	QRD141J-271S	"	"	"
R269	QVZ1220-003	100 kΩ	1/2 W	Volume (Tone; Bass)
R270	QVZ1220-004	"	"	" (Tone; Treble)
R281	QRD141J-105S	1 MΩ	1/4 W	Carbon
R282	QRD141J-105S	"	"	"
R283	QRD141J-333S	33 kΩ	"	"
R284	QRD141J-333S	"	"	"
R287	QRD141J-203S	20 kΩ	"	"
R288	QRD141J-203S	"	"	"
R289	QVZ1221-001	100 kΩ	1/2 W	Volume
R301	QRD141J-470S	47 Ω	1/4 W	"
R302	QRD141J-470S	"	"	"
E303	QRD141J-303S	30 kΩ	"	"
R304	QRD141J-303S	"	"	"
R305	QRD126J-101	100 Ω	1/2 W	"
R306	QRD126J-101	"	"	"
R307	QRD126J-101	"	"	"
R308	QRD126J-101	"	"	"
R311	QVP4AOB-101	"	0.15 W	Variable (Carbon)
R312	QVP4AOB-101	"	"	"
R313	QRD126J-101	"	1/2 W	Carbon
R314	QRD126J-101	"	"	"
R315	QRD126J-101	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R316	QRD126J-101	100 Ω	1/2 W	Carbon
R317	QRD141J-391S	390 Ω	1/4 W	"
R318	QRD141J-391S	"	"	"
R319	QRD126J-391	"	1/2 W	"
R320	QRD126J-391	"	"	"
R321	QRD149J-330S	33 Ω	1/4 W	"
R322	QRD149J-330S	"	"	"
R323	QRD126J-391	390 Ω	1/2 W	"
R324	QRD126J-391	"	"	"
R325	QRD141J-303S	30 kΩ	1/4 W	"
R326	QRD141J-303S	"	"	"
R327	QRD141J-113S	11 kΩ	"	"
R328	QRD141J-113S	"	"	"
R329	QRD149-681S	680 Ω	"	"
R330	QRD149-681S	"	"	"
R331	QRD141J-273S	27 kΩ	"	"
R332	QRD141J-273S	"	"	"
R333	QRD126J-101	100 Ω	1/2 W	"
R334	QRD126J-101	"	"	"
R430	QRD141J-223S	22 kΩ	1/4 W	"
R601	QRD126J-3R3	3.3 Ω	1/2 W	"
R602	QRD126J-3R3	"	"	"
R603	QRD141J-680S	68 Ω	1/4 W	"
R604	QRD141J-270S	27 Ω	"	"
R605	QRD141J-153S	15 kΩ	"	"
R606	QRD141J-564S	560 kΩ	"	"
R607	QRD141J-153S	15 kΩ	"	"
R608	QRD141J-333S	33 kΩ	"	"
R609	QRD141J-563S	56 kΩ	"	"
R610	QRD141J-135S	1.3 MΩ	"	"
R611	QRD141J-563S	56 kΩ	"	"
R612	QRD141J-432S	4.3 kΩ	"	"

Others

Item No.	Part Number	Rating	Description
	E10266-002		Printed Circuit Board
	E03628-3UD		3 Pin Plug (Test Points)
	E45524-001		Contact Clip for Pilot Lamp
S101	QSR0072-002		Rotary Switch (Source Selector)
S102	QSL4309-011		Lever Switch (Tape Monitor)
S103	QSL8309-011		Lever Switch (Tape Dubbing)
S104	QSL4209-011		Lever Switch (Muting)
S105	QSL4209-011		" (Mode)
	E03732-003A		3 Pin Plug
	E03732-004A		4 Pin Plug
	QSP0231-101		S201 – S203 Push Switch
	E03043-40CW		Pin Jack Ass'y (Tape-2)
	E03591-40D		Pin Jack Ass'y (Tape-1)
	E03591-60D		Pin Jack Ass'y (Phono, Tuner, Aux)
	E03623-002		DIN Socket (Tape-1) except for (J), (C) Type
	E03763-001		Phono Ground Terminal

7-(2) TXX-133 B,C,D or E Power Amp. & Protector P.C. Board Ass'y

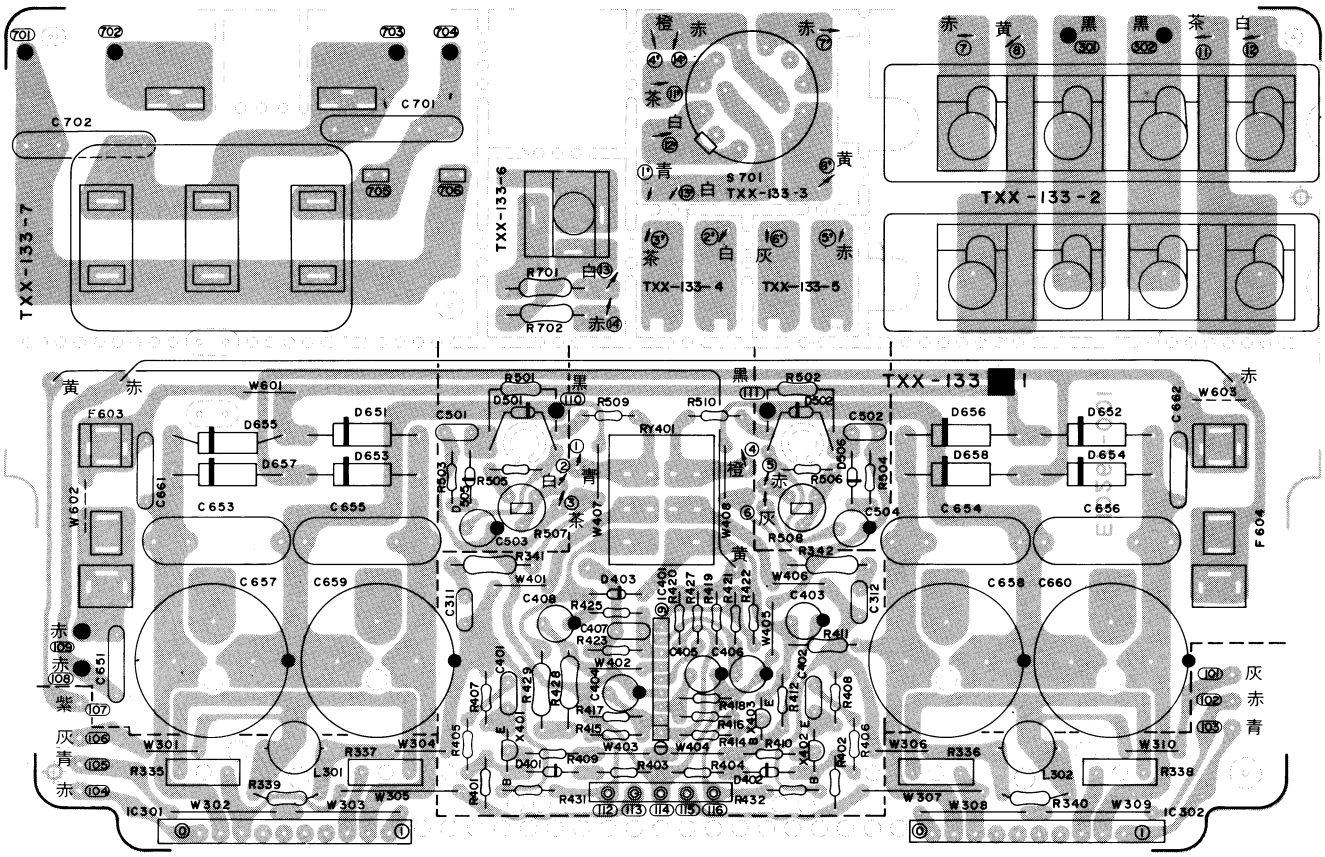
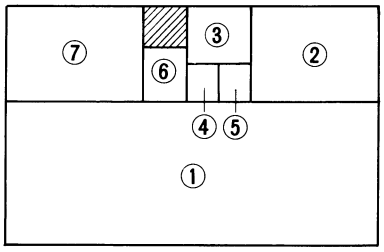


Fig. 15

Locations



① TXX-133□-1 Power Amp. and Protector P.C. Board Ass'y
② TXX-133-2 Speaker Switch P.C. Board Ass'y
③ TXX-133-3 Speaker Terminal P.C. Board Ass'y
④ TXX-133-4 Power Meter P.C. Board Ass'y
⑤ TXX-133-5 Power Meter P.C. Board Ass'y
⑥ TXX-133-6 Headphones Jack P.C. Board Ass'y
⑦ TXX-133-7 AC Outlet P.C. Board Ass'y

Note: The number of TXX-133-1 varies according to the area employed. See table below.

P.C. Board Ass'y No.	Set Type Name	Designated Area
TXX-133B-1	(J)	U.S.A.
TXX-133C-1	(C)	Canada
TXX-133D-1	(U), (P), (F)	Military Market and Other Countries
TXX-133E-1	(A), (E), (BS)	Continental Europe and U.K.

Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X401	2SC1775AV (E, F)	0.3 W	200 MHz	Silicon	Hitachi
X402	2SC1775AV (E, F)	"	"	"	"
X403	2SA872AV (D, E)	"	120 MHz	"	"

Integrated Circuits

Item No.	Part Number	Rating	Description	Maker
		Pc		
IC301	STK-0060		Darlington Power Pack IC	Sankyo
IC302	STK-0060		〃	〃
IC401	TA7317P	0.5 W	Protector I.C.	Toshiba

Diodes

Item No.	Part Number	Rating	Description	Maker
D401	1S2473		Silicon	Toyo Dengu
D402	1S2473		〃	〃
D403	1S2473		〃	〃
D501	1S188FM		Germanium	Sanyo
D502	1S188FM		〃	〃
D505	1S2076-32		Silicon	Hitachi
D506	1S2076-32		〃	〃
D651	30D2FA-S		〃	Japan International Rectifier
D652	30D2FA-S		〃	〃
D653	30D2FA-S		〃	〃
D654	30D2FA-S		〃	〃
D655	30D2FA-S		〃	〃
D656	30D2FA-S		〃	〃
D657	30D2FA-S		〃	〃
D658	30D2FA-S		〃	〃

Coils

Item No.	Part Number	Rating	Description
L301	E04059-2R7	2.7 μH	Choke Coil
L302	E04059-2R7	〃	〃

Capacitors

Item No.	Part Number	Rating		Description
C311	QFZ0074-104	0.1 μF	50 V	Metallized Film
C312	QFZ0074-104	〃	〃	〃
C401	QFM31HK-104	〃	〃	〃
C402	QFM31HK-104	〃	〃	〃
C403	QEW51CA-226	22 μF	16 V	Electrolytic

Capacitors

Item No.	Part Number	Rating		Description
C404	QEW51AA-476	47 μF	10 V	Electrolytic
C405	QEW51AA-476	〃	〃	〃
C406	QEW51CA-226	22 μF	16 V	〃
C407	QFM31HK-153	0.015 μF	50 V	Mylar
C408	QEW51HA-474	0.47 μF	〃	Electrolytic
C501	QFM31HK-223	0.022 μF	〃	Mylar
C502	QFM31HK-223	〃	〃	〃
C503	QEW51AA-476	47 μF	10 V	Electrolytic
C504	QEW51AA-476	〃	〃	〃
C651	QFZ0072-223	0.022 μF	630 V	Metallized Film
C653	QFH42EK-105	1 μF	250 V	〃
C654	QFH42EK-105	〃	〃	〃
C655	QFH42EK-105	〃	〃	〃
C656	QFH42EK-105	〃	〃	〃
C657	QEZ0057-688	6,800 μF	56 V	Electrolytic
C658	QEZ0057-688	〃	〃	〃
C659	QEZ0057-688	〃	〃	〃
C660	QEZ0057-688	〃	〃	〃
C661	QFZ0072-223	0.022 μF	630 V	Metallized Film
C662	QFZ0072-223	〃	〃	〃
C701	QCZ9013-103	0.01 μF	AC125 V	Ceramic (J), (C) Type only
C702	QCZ9013-103	〃	〃	〃

Resistors

Item No.	Part Number	Rating		Description
R335	QRM035K-R47S	0.47 Ω	3 W	Metal Plate
R336	QRM035K-R47S	〃	〃	〃
R337	QRM035K-R47S	〃	〃	〃
R338	QRM035K-R47S	〃	〃	〃
R339	QRX129J-4R7	4.7 Ω	1/2 W	Oxide Metal Film
R340	QRX129J-4R7	〃	〃	〃
R341	QRX017J-6R8S	6.8 Ω	1 W	〃
R342	QRX017J-6R8S	〃	〃	〃
R401	QRD146J-681S	680 Ω	1/4 W	Carbon
R402	QRD146J-681S	〃	〃	〃
R403	QRD141J-562S	5.6 kΩ	〃	〃
R404	QRD141J-562S	〃	〃	〃
R405	QRD141J-101S	100 Ω	〃	〃
R406	QRD141J-101S	〃	〃	〃
R407	QRD149J-471S	470 Ω	〃	〃
R408	QRD149J-471S	〃	〃	〃
R409	QRD141J-123S	23 kΩ	〃	〃
R410	QRD141J-123S	〃	〃	〃
R411	QRG129J-270	27 Ω	1/2 W	Oxide Metal Film
R412	QRD141J-103S	10 kΩ	1/4 W	Carbon
R414	QRD141J-473S	47 kΩ	〃	〃
R415	QRD141J-563S	56 kΩ	〃	〃
R416	QRD141J-563S	〃	〃	〃
R417	QRD141J-273S	27 kΩ	〃	〃
R418	QRD141J-273S	〃	〃	〃

Resistors

Item No.	Part Number	Rating		Description
R419	QRD141J-124S	120 kΩ	1/4 W	Carbon
R420	QRD141J-683S	68 kΩ	"	"
R421	QRD141J-204S	200 kΩ	"	"
R422	QRD141J-183S	18 kΩ	"	"
R423	QRD141J-333S	33 KΩ	"	"
R425	QRD141J-563S	56 kΩ	"	"
R427	QRD141J-332S	3.3 kΩ	"	"
R428	QRG017J-331S	330 Ω	1 W	Oxide Metal Film
R429	QRG017J-331S	"	"	"
R431	QRD149J-680S	68 Ω	1/4 W	Carbon
R432	QRD149J-680S	"	"	"
R501	QRG129J-821	820 Ω	1/2 W	Oxide Metal Film
R502	QRG129J-821	"	"	"
R503	QRD141J-220S	22 Ω	1/4 W	Carbon
R504	QRD141J-220S	"	"	"
R505	QRD141J-681S	680 Ω	"	"
R506	QRD141J-681S	"	"	"
R507	QVP4AOB-222	2.2 kΩ	0.15 W	Variable (Carbon)
R508	QVP4AOB-222	"	"	"
R509	QRD149J-680S	68 Ω	1/4 W	Carbon
R510	QRD149J-680S	"	"	"
R701	QRG017J-221S	220 Ω	1 W	Oxide Metal Film
R702	QRG017J-221S	"	"	"

Others

Item No.	Part Number	Rating	Description
	E10267-002		Printed Circuit Board
	E03572-011		Speaker Terminal
	E03628-5UD		5 Pin Plug (Test Points)
	E03675-003		Fuse Clip (J), (C) Type Only
	E03733-0401		4 Pin Socket Wire Ass'y
	E03733-0306		3 Pin Socket Wire Ass'y
	E43727-001		Terminal for AC Wiring
	E45524-001		Contact Clip for Fuse (C),(U),(P),(F) Type Only
	E48965-002		" Other than (J), (C), (U), (P), (F) Type
	QMC0637-001		AC Outlet Ass'y (J), (C) Type Only
	QMS6302-102		Headphones Jack
S701	QSR0083-001		Rorary Switch (Speaker Selector)
RY401	ESK6D24-211		Relay Switch

Notes:
(C) : Canada
(F) : Military Market in Europe
(J) : U.S.A.
(P) : Military Market in Asia
(U) : Other Countries

7-(3) TPS-194A AC Outlet & Voltage Selector P.C. Board Ass'y

[Employed only on (U), (P) and (F) types, replacing the TXX-133-7 of (J) and (C) types]

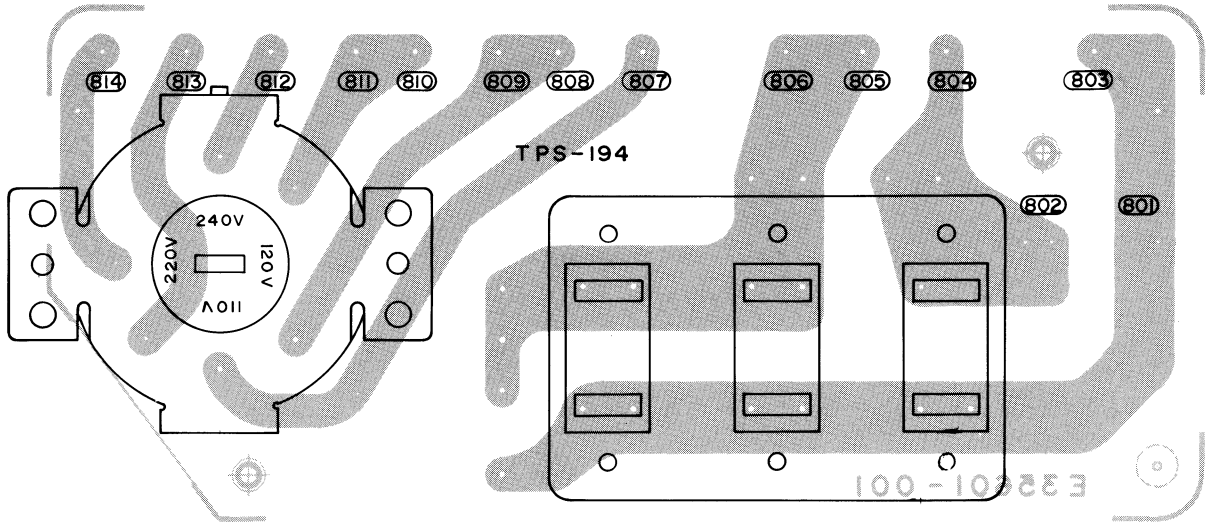


Fig. 16

Capacitors

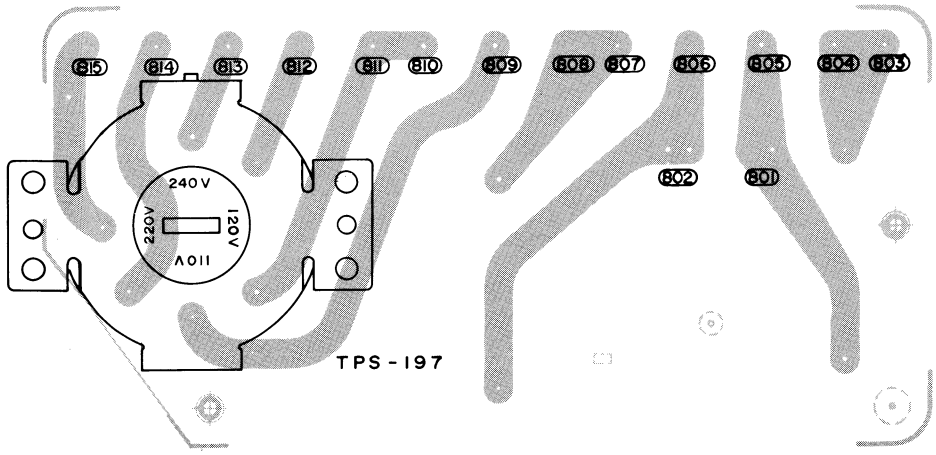
Item No.	Part Number	Rating	Description
C801	QFH53AM-103M	0.01 μF	Switch By-pass
C802	"	"	Line to Line

Others

Item No.	Part Number	Rating	Description
	QMC0637-002		AC Outlet Ass'y
	QSR0085-001		Line Voltage Selector Selectable 110 V, 120 V, 220 V, 240 V

7-(4) TPS-197A Line Voltage Selector P.C. Board Ass'y

[Employed only on (E), (A) and (BS) types replacing the TXX-133-7 of (J) and (C) types]



Notes:
(A) : Australia
(BS) : U.K.
(C) : Canada
(E) : Continental Europe
(F) : Military Market in Europe
(J) : U.S.A.
(P) : Military Market in Asia
(U) : Other Countries

Fig. 17

Other

Item No.	Part Number	Rating	Description
	QSR0085-001		Line Voltage Selector Selectable 110 V, 120 V, 220 V, 240 V

8. Packing Materials and Part Numbers

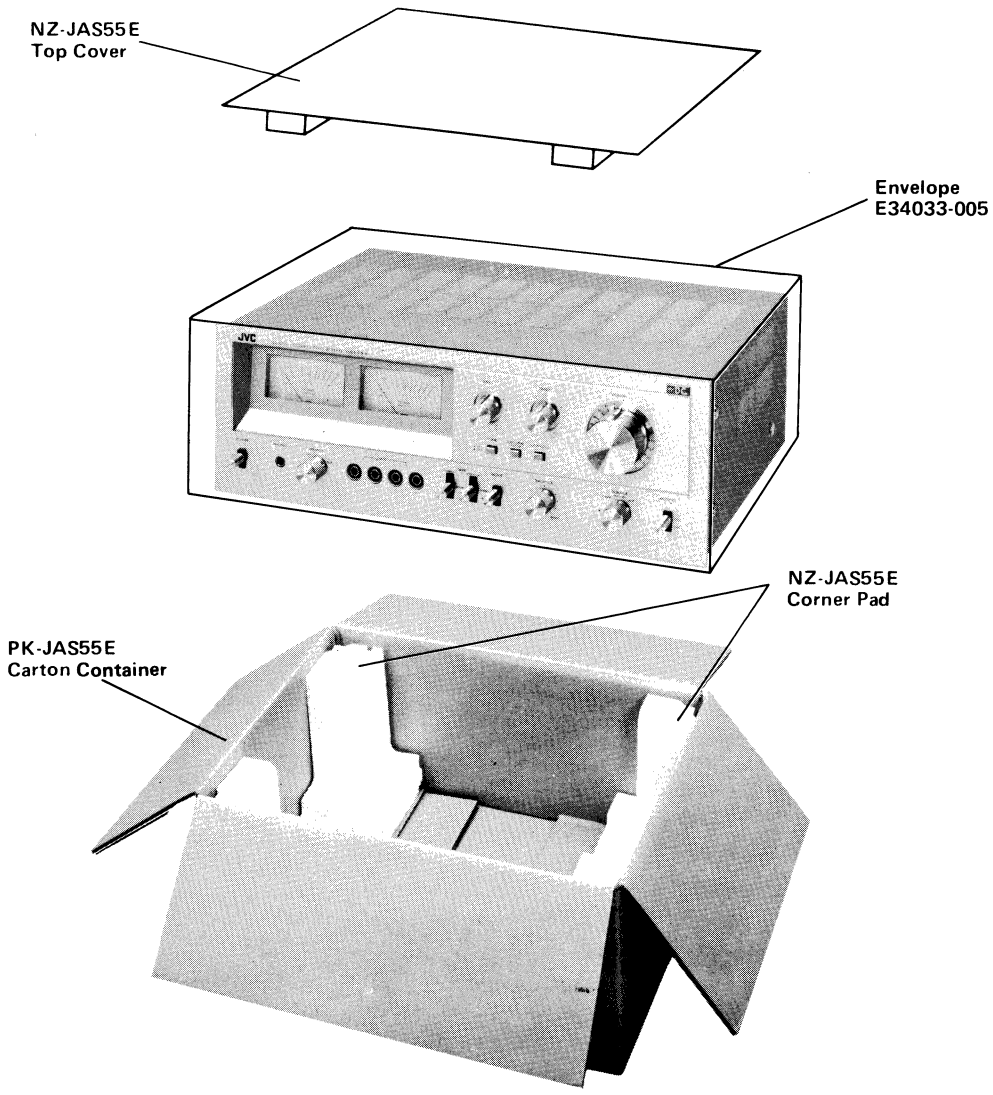


Fig. 18

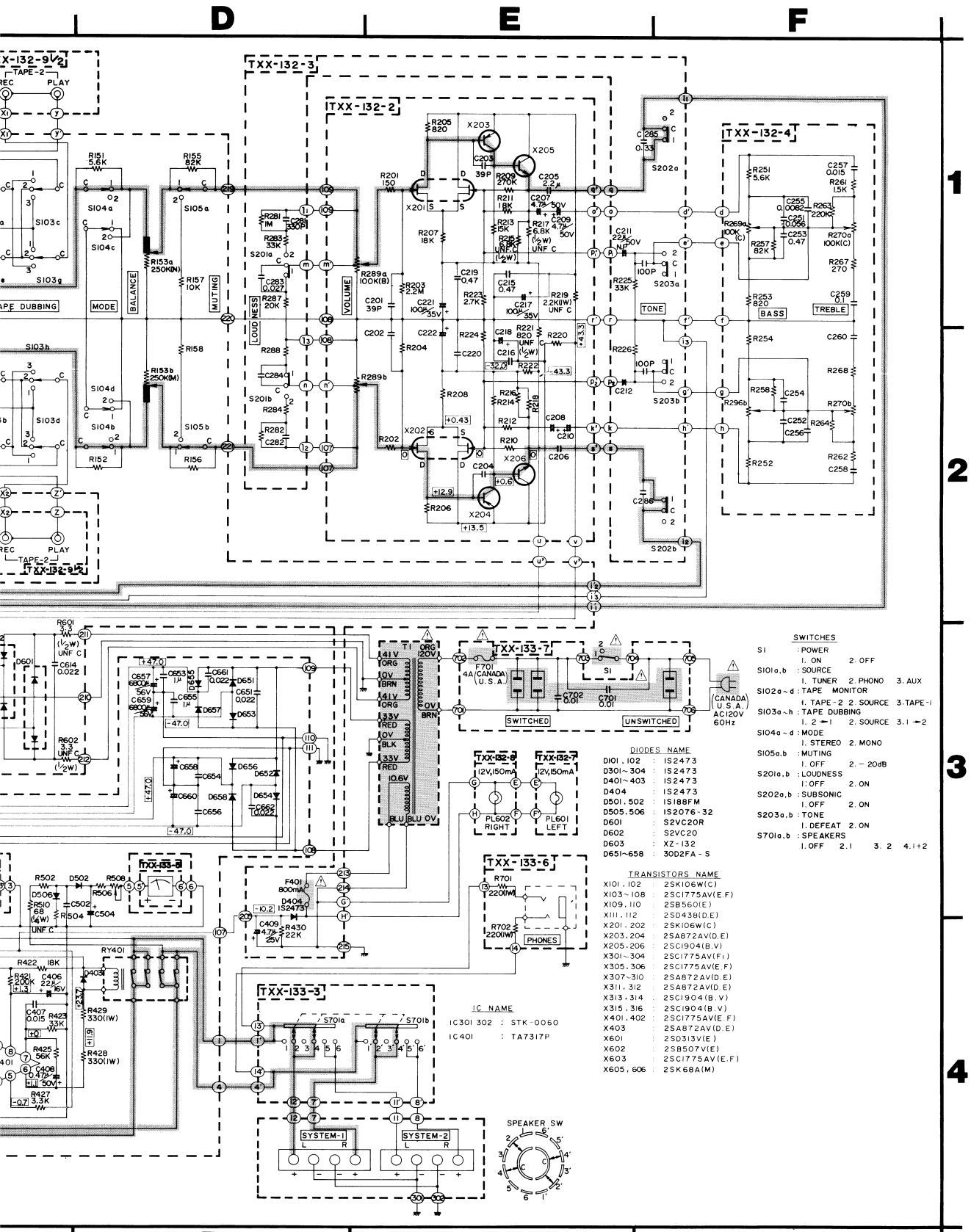
9. Accessories List

Item No.	Part Number	Description	Q'ty
1	E30580-678A	Instruciton Book	1
2	See below	Warranty Card	1
3	E64207-002	Envelope for Instruciton Book and Warranty Card	1
4	BT20024B	"Do It Better" (for U.S.A. only)	1
5	BT20023	Service Procedures (for U.S.A. only)	1
6	QMF60R1-5R0 (5.0 A) (See page 24.)	Fuse (for U.S. Military Market and Others) ⚠	1
7	E64208-001	Envelope for Fuses (for U.S. Military Market and Others)	1
8	E7958-N	Fuse Label (U.S. Military Market and Others)	1
9	E64216-002	Caution Tag (with Power Cord for Military Market only)	1

NOTE: ⚠ SAFETY PARTS

Warranty Card

U.S.A.	Canada	U.S. Military Market	Europe	Australia	U.K.
BT20032	BT20025B	BT20032	–	BT20029	BT20013B



SWITCHES

SI	: POWER 1. ON 2. OFF
S101a,b	: SOURCE 1. TUNER 2. PHONO 3. AUX
S102a~d	: TAPE MONITOR 1. TAPE-2 2. SOURCE 3. TAPE-1
S103a~h	: TAPE DUBBING 1. 2 → 1 2. SOURCE 3. 1 → 2
S104a~d	: MODE 1. STEREO 2. MONO
S105a,b	: MUTING 1. OFF 2. – 20dB
S201a,b	: LOUDNESS 1. OFF 2. ON
S202a,b	: SUBSONIC 1. OFF 2. ON
S203a,b	: TONE 1. DEFEAT 2. ON
S701a,b	: SPEAKERS 1. OFF 2. 1 3. 2 4. 1+2

DIODES NAME

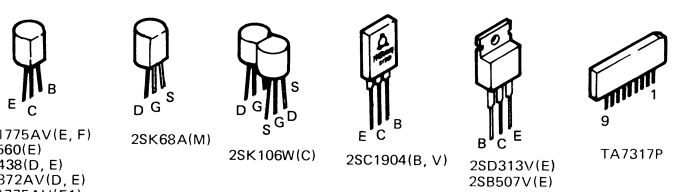
D101, 102	: 1S2473
D301~304	: 1S2473
D401~403	: 1S2473
D404	: 1S2473
D501, 502	: 1S188FM
D505, 506	: 1S2076-32
D601	: S2VC20R
D602	: S2VC20
D603	: XZ-132
D651~658	: 30D2FA-S

TRANSISTORS NAME

X101, 102	: 2SK106W(C)
X103~108	: 2SC1775AV(E,F)
X109, 110	: 2SB560(E)
X111, 112	: 2SD438(D,E)
X201, 202	: 2SK106W(C)
X203, 204	: 2SA872AV(D,E)
X205, 206	: 2SC1904(B,V)
X301~304	: 2SC1775AV(F1)
X305, 306	: 2SC1775AV(E,F)
X307~310	: 2SA872AV(D,E)
X311, 312	: 2SA872AV(D,E)
X313, 314	: 2SC1904(B,V)
X315, 316	: 2SC1904(B,V)
X401, 402	: 2SC1775AV(E,F)
X403	: 2SA872AV(D,E)
X601	: 2SD313V(E)
X602	: 2SB507V(E)
X603	: 2SC1775AV(E,F)
X605, 606	: 2SK68A(M)

IC NAME

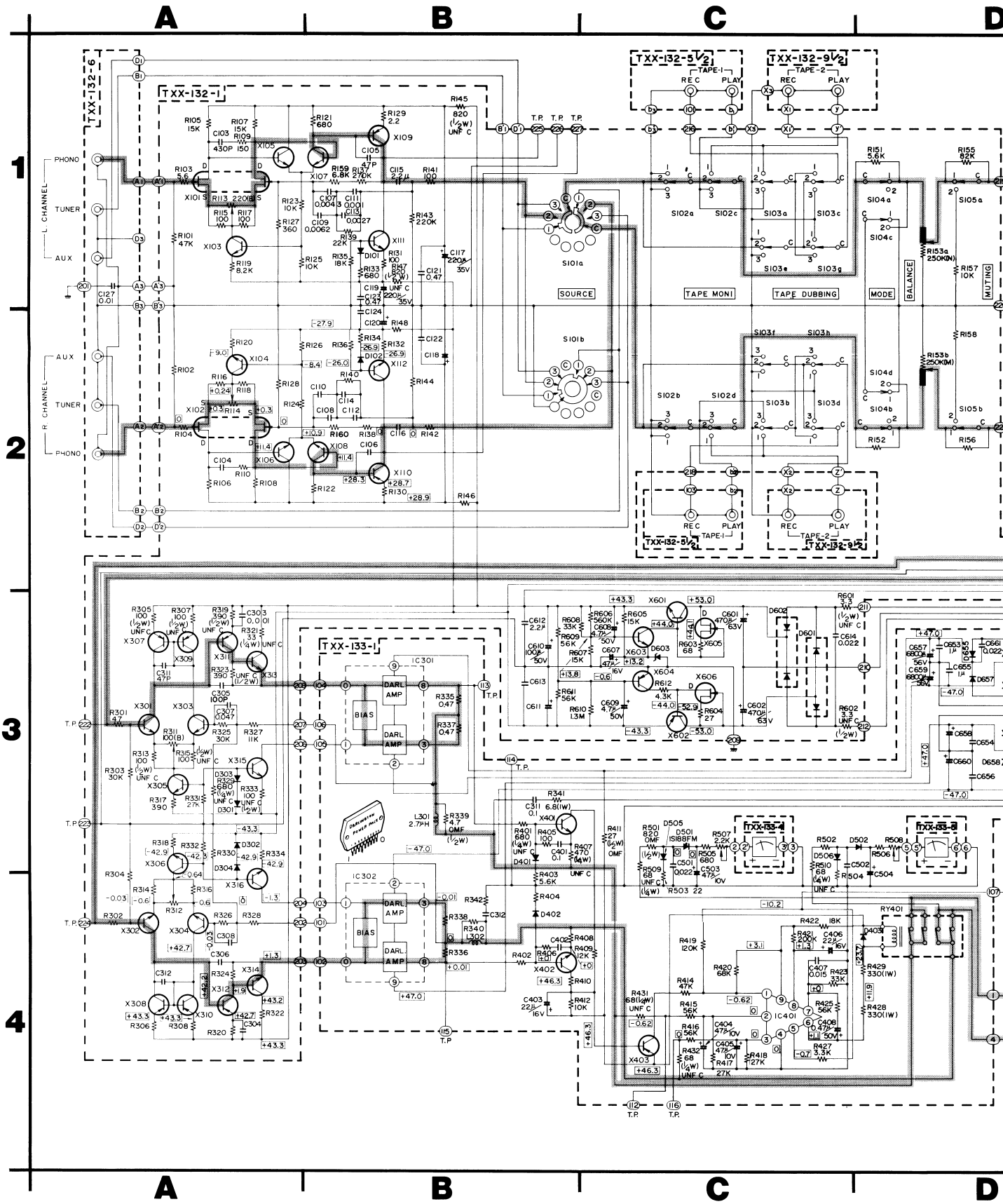
IC301, 302	: STK-0060
IC401	: TA7317P



Notes:

1. Parts in red indicate transistors or ICs.
2. ▒▒ indicates signal path.
3. —— indicates positive B power supply.
   Voltage values in □ are positive.
4. —— indicates negative B power supply.
   Voltage values in □ are negative.
5. When replacing the parts in the darkened ares ▒▒ and those marked with ⚠, be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

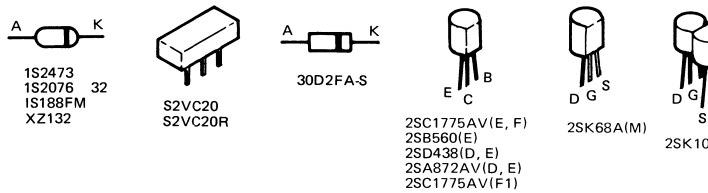
10. JA-S55 Schematic Diagram



Printed Circuit Board Ass'y Locations

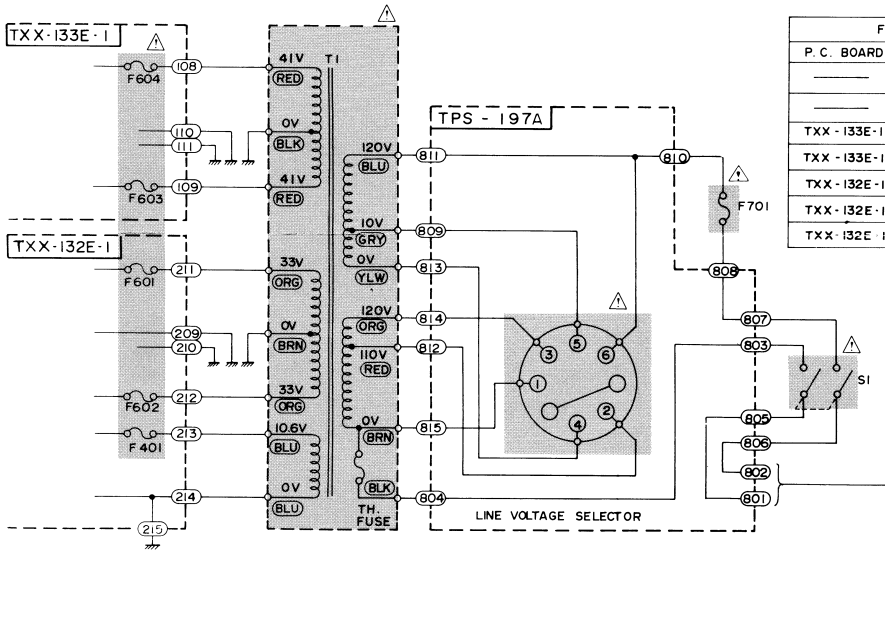
P.C. Board Ass'y	Description	Page
TXX-132B, C, D or E	Driver & Equalizer Amp. P.C. Board Ass'y	9
TXX-133B, C, D or E	Power Amp. & Protector P.C. Board Ass'y	16
TPS-194A	AC Outlet & Voltage Selector P.C. Board Ass'y	20
TPS-197A	Line Voltage Selector P.C. Board Ass'y	20

Transistor, IC and Diode Lead Identification



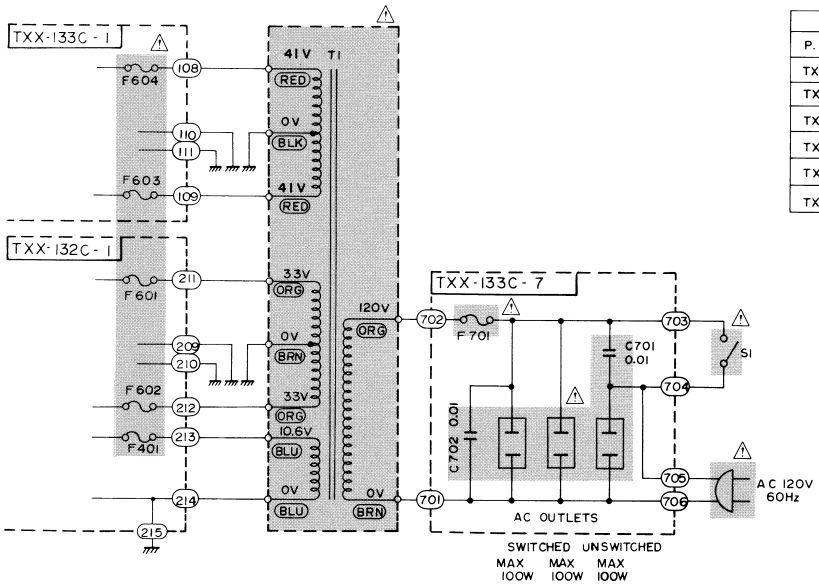
(E), (A), (BS)

(E) for EUROPE : ~ 220V, 50Hz
(A) for AUSTRALIA : ~ 240V, 50Hz
(BS) for U.K. : ~ 240V, 50Hz



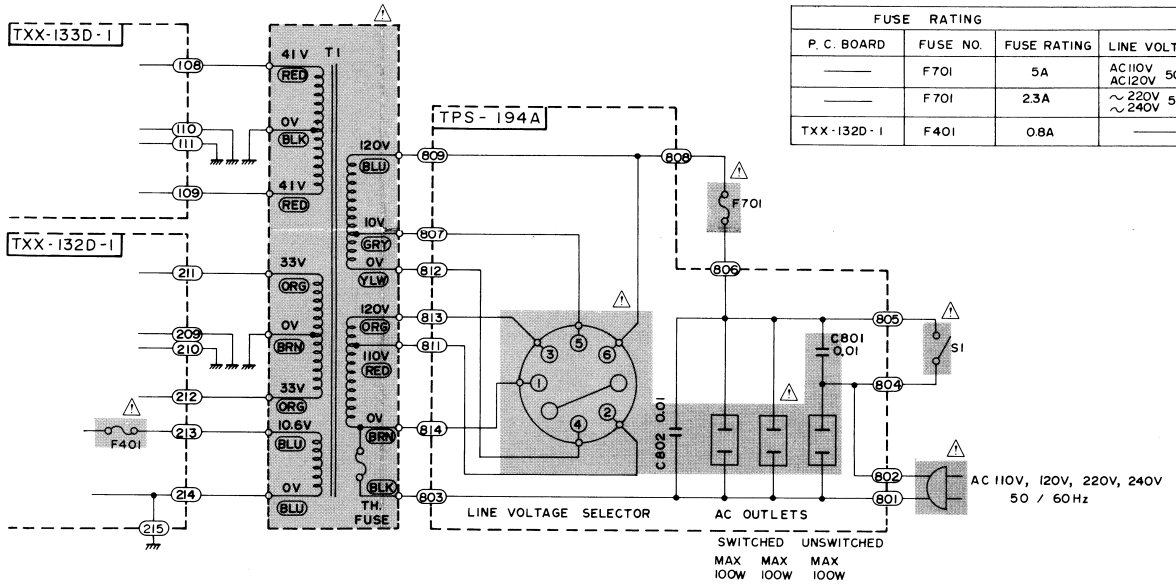
FUSE RATING			
P.C. BOARD	FUSE NO.	FUSE RATING	LINE VOLTAGE
———	F701	5AT	AC110V AC120V 50/60Hz
———	F701	2.5AT	~220V ~240V 50Hz
TXX-133E-1	F603	8AT	———
TXX-133E-1	F604	8AT	———
TXX-132E-1	F601	800mAT	———
TXX-132E-1	F602	800mAT	———
TXX-132E-1	F401	800mAT	———

(C) for CANADA : AC120V 60Hz



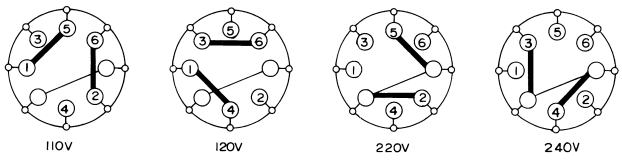
FUSE RATING			
P.C. BOARD	FUSE NO.	FUSE RATING	LINE VOLTAGE
TXX-133C-7	F701	5A	AC120V, 60Hz
TXX-133C-1	F603	8A	———
TXX-133C-1	F604	8A	———
TXX-132C-1	F601	0.8A	———
TXX-132C-1	F602	0.8A	———
TXX-132C-1	F401	0.8A	———

(U), (P), (F) (U) for OTHER COUNTRIES
(P), (F) for PACEX

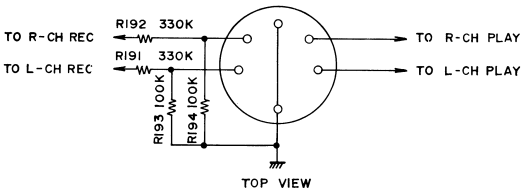


FUSE RATING			
P. C. BOARD	FUSE NO.	FUSE RATING	LINE VOLTAGE
———	F701	5A	AC 110V AC 120V 50/60Hz
———	F701	2.3A	~ 220V ~ 240V 50Hz
TXX-132D-1	F401	0.8A	———

VOLTAGE SELECTOR CONNECTION

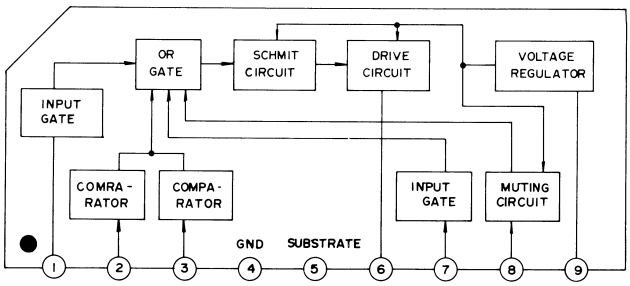


DIN CONNECTOR



ATTACHED TO (E),(A),(BS),(U),(P),(F) TYPE MODEL

PROTECTOR IC IC 401 TA7317P



Note: ⚠ Safety Parts.

11. Parts List with Specified Numbers for Designated Areas

Page	Item No.	Description	U.S.A.	Canada	U.S. Military Market & Other Countries	Europe	Australia	U.K.
5		Power Switch ⚠	QSL2214-002	QSL2214-002	QSL2214-002	QSL2214-004	QSL2214-004	QSL2214-004BS
6		Power Cord ⚠	QMP1200-244	QMP1200-244	QMP1200-244	QMP3910-244	QMP2610-200	QMP9017-008BS
4		Cord Stopper ⚠	QHS3876-162	QHS3876-162	QHS3876-162	QHS3876-162	QHS3876-162	QHS3876-162BS
4		Power Transformer ⚠	E03077-31B	E03077-31B	E03077-31C	E03077-31C	E03077-31C	E03077-31CBS
4, 6		Fuse ⚠ (Primary) (F701)	QMF61UI-4R0 (4.0 A)	QMF60RI-5R0 (5.0 A)	QMF60R-5R0 (5.0 A) QMF60RI-2R3 (2.3 A)	QMF51A2-2R5 (2.5 AT)	QMF51A2-2R5 (2.5 AT)	QMF51A2-2R5BS (2.5 AT)
4, 5		(Secondary) ⚠ (F603, F604)	–	QMF60RI-8R0 (8 A)	–	QMF51A2-8R0 (8 AT)	QMF51A2-8R0 (8 AT)	QMF51A2-8R0BS (8 AT)
		(Secondary) ⚠ (F601, F602, F401)	QMF61UI-R80 (0.8 A) (F401 only)	QMF60RI-R80 (0.8 A)	QMF60RI-R80 (0.8 A) (F401 only)	QMF51A2-R80 (0.8 AT)	QMF51A2-R80 (0.8 AT)	QMF51A2-R80BS (0.8 AT)
4, 6		AC Outlet ⚠	QMC0637-001	QMC0637-001	QMC0637-002	–	–	–
6		Voltage Selector ⚠	–	–	QSR0085-001	QSR0085-001	QSR0085-001	QSR0085-001BS
6		Rear Panel	E22746-001	E22746-001	E22746-002	E22746-002	E22746-002	E22746-002BS
6	7-(2)	Fuse P.C. Board Ass'y ⚠	TXX-133B-7	TXX-133C-7	–	–	–	–
20	7-(3)	Line Voltage Selector P.C. Board Ass'y ⚠	–	–	TPS-194A	TPS-197A	TPS-197A	TPS-197ABS
9	7-(1)	Driver & EQ Amp. P.C. Board Ass'y	TXX-132B	TXX-132C	TXX-132D	TXX-132E	TXX-132E	TXX-132EBS
16	7-(2)	Power Supply P.C. Board Ass'y	TXX-133B	TXX-133C	TXX-133D	TXX-133E	TXX-133E	TXX-133EBS
		Mask Plate	–	–	–	E65494-001	E65494-001	E65494-001

NOTE: ⚠ SAFETY PARTS

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